Water Management and
Reallocation Studies
Planning Center of Expertise
U.S. ARMY ENGINEER DIVISION
PACESETTER
SOUTHWESTERN

Learning Objective

- Describe the role of the Water Management and Reallocation Studies Center of Expertise in water supply planning efforts.

US Army Corps of Engineers ®

Why Planning Centers of Expertise?

- In August 2003, the Director of Civil Works designated **five national Planning Centers of Expertise** to enhance the Corps' planning capability for **inland navigation**, **deep draft navigation**, **ecosystem restoration**, **hurricane and storm damage reduction**, **flood damage reduction**, and **water supply and reallocation**.

- The Centers are part of **the Corps' national initiative** to improve the quality and effectiveness of water resources planning, referred to as the **Planning Excellence Program**.

- The role of the Planning Centers is to **focus on plan formulation and the complex technical evaluation associated with formulation**. Each Planning Center is led by a team of experts specialized in plan formulation, environmental sciences, economics, and related technical disciplines.

US Army Corps of Engineers ®

Geographic Scope

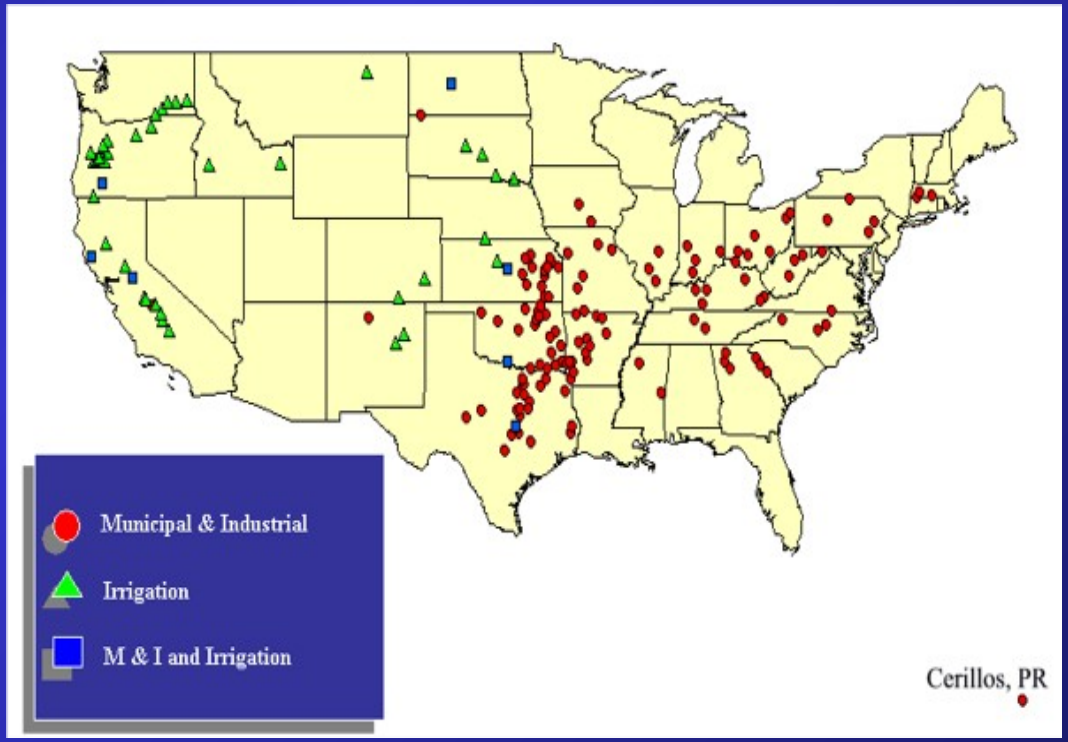
Water Management and Reallocation Studies
Planning Center of Expertise

National

- Almost every state has a Corps project with water supply
- 184 lakes with WS storage: 136 M&I, 48 Ag (5 have both)

Regional

- Projects with WS storage heavily concentrated in SWD, NWD, LRD, SPD



One Corps Serving The Army and the Nation

US Army Corps of Engineers ®

Water Supply Storage M&I and Agric.

Water Management and Reallocation Studies
Planning Center of Expertise

Division	Projects	Contracts	Storage Space (acre-feet)			
			Present Use	Future Under Contract	Not Under Contract	Total
NAD	8	9	147,810	0	0	147,810
SAD	11	26	208,080	12,920	0	221,000
LRD	25	35	582,113	0	2,200	584,313
MVD	8	12	211,314	131,260	32,557	375,131
NWD	16	29	406,914	455,530	81,992	944,436
SWD	64	192	5,071,838	1,569,960	288,088	6,929,886
SPD	4	4	557,900	0	0	557,900
TOTAL	**136**	**307**	**7,185,969**	**2,169,670**	**404,837**	**9,760,476**

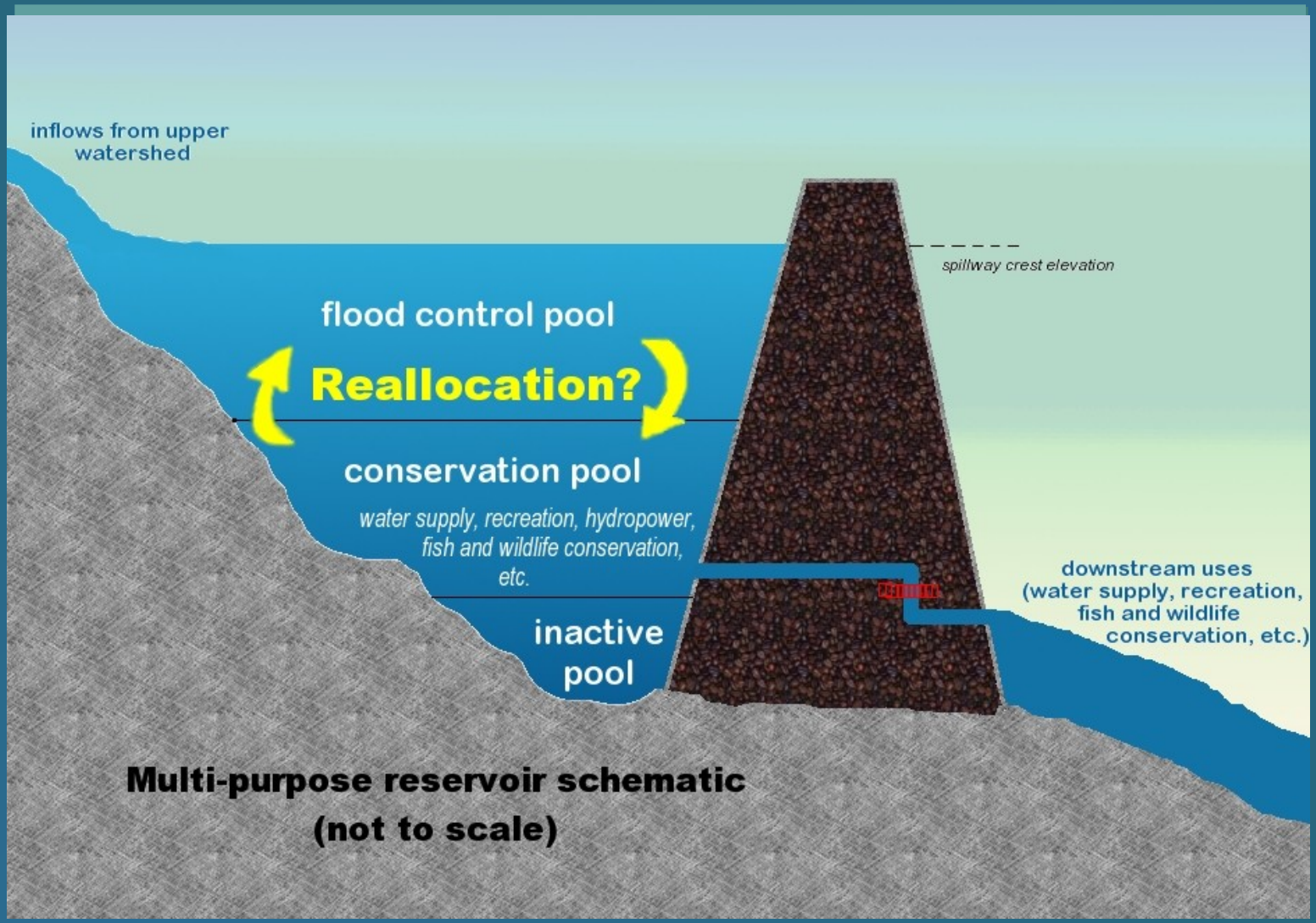
Division	Projects	Total Project Cost ($1000)	Total Federal Cost to Irrigation ($1000)	Storage Reserved for Irrigation	
				Joint (1000AF)	Specific (1000 AF)
NWD	30	3,563,099	1,159,697	50,496	NA
SWD	2	85,500	42,100	0	64
SPD	16	868,070	525,039	5,490	577
TOTAL	**48**	**4,516,669**	**1,726,836**	**55,986**	**NA**

US Army Corps of Engineers ®

PCX Focus

A Corps project with WS is a multi-purpose reservoir.
The PCX therefore is oriented toward:

- **Holistic watershed approach to planning** — A Corps lake is:
  - *Affected by **land and water use** upstream of it, and affects land and water use downstream of it*
  - *Often **operated as a system** with other lakes in the watershed*
- **Multi-purpose and multi-objective planning** — A multi-purpose Corps lake should be operated so as to:
  - *Achieve an **efficient, cost-effective balance among its outputs**, in itself and in the system it's a part of*
  - *Satisfy the multiple land and water management, economic, social, and environmental **objectives of the region**.*
- **Collaborative planning** — Multiple purposes and objectives mean **multiple stakeholders**, who need to informed, coordinated with, and brought onto the team.


inflows from upper watershed
spillway crest elevation
flood control pool
Reallocation?
conservation pool
water supply, recreation, hydropower, fish and wildlife conservation, etc.
inactive pool
downstream uses (water supply, recreation, fish and wildlife conservation, etc.)
Multi-purpose reservoir schematic
(not to scale)

US Army Corps of Engineers ®

PCX Missions

- **Support and promote Corps of Engineers planning technical excellence** — advisory and coordination/management services, including:
  - Technical water supply and other water management analyses (H&H, economic, financial, environmental)
  - Report preparation
  - Consultation and advice (technical and policy)
  - Independent technical review (ITR) and external peer review (EPR)
  - Water storage agreement preparation and review
  - Training
  - Capturing institutional knowledge and lessons learned

US Army Corps of Engineers ®

PCX Missions (cont.)

- **Build strategic relationships with stakeholders** in water management planning at every level, to promote collaboration on holistic solutions to water resources needs, including:
  - Headquarters: RITs, Planning CoP, business line managers RBCs and Districts
  - Other PCXs (e.g., Flood Damage Reduction, Environmental, Hydropower)
  - Other interested Federal agencies (e.g., USGS, FWS)
  - State and river basin water management agencies
  - Other critical stakeholders (e.g., power marketing agencies)

US Army Corps of Engineers ®

Partnerships

Potential Partners / Stakeholders:

Corps				Other Fed.	State	Sponsors	Interest Groups
HQ	*MSCs*	*Districts*	*Labs, etc.*				
Planning CoP and sub-CoPs (Plan Formulation, Economics, Environmental) **Civil Programs and Project Mgmt** **WS BLM Managers** **Economics CoP** **Engineering CoP** **Ops CoP**			**ERDC** **HEC** **Hydro Design Ctr** **Other PCXs**	**EPA** **DOI** **FERC** **NRCS** **FWS** **BOR**	**Resource Agencies** **Water Mgmt Agencies** **River Basin authorities**	**WS studies** **WS Contracts** **Watershed Mgmt studies**	**Environmental** **Recreation** **Water supply, conservation**

Partnerships underway: Planning CoP and sub-CoPs, other PCXs, WS Business Line managers, HQ RIT and Policy Review staff

US Army Corps of Engineers ®

PCX Missions (cont.)

- **Identify, monitor, and maintain water management expertise on policy, agreements, and technical analysis**, by maintaining a Corps-wide knowledge base of policy, guidance, relevant Corps projects, and planning lessons learned
- **Assist Headquarters** in water management related policy studies and development of guidance
- **Assess research and development needs** for future skills and technology
- **Support the Headquarters water supply business line manager:**
  - Participate in budget development/defense/execution process
  - Participate in development of budget program metrics

US Army Corps of Engineers ®

Organization

Location: PCX management: Southwestern Division
Technical staff: District offices

Personnel:

SWD: Executive Director — **Jo Ann M. Duman**, Chief, Planning and Policy CoP

Technical Director — **Peter H. Shaw**, Senior Economist

Districts: ~28 technical experts available for national support (*roster is still under development*) — 14 of these are in SWD's four Districts

Funding: $25K in FY 2006

US Army Corps of Engineers ®

Initiatives

Conduct ITR/Peer Review

- *no studies requiring ITR/EPR to date*
- working within the Planning CoP to develop a comprehensive roster of Corps planners with significant or SME expertise by business line and analytical specialty, including water supply and related areas

Models Certification

- *none specifically required to date*
- working with national PCX leadership on general development of model certification protocols

Provide Advice to Districts — policy guidance and technical assistance as needed — assist Headquarters staff in policy compliance review as needed

US Army Corps of Engineers ®

Communications Strategy

Promote understanding within the Corps family about what we are doing, why we are doing it, and how the process will work — **develop a two-way dialogue** on integrating our principles into programs and projects early in the planning process — **communicate the Center's resources and capabilities**.

Activities (some accomplished, some future):

- Develop newsletter/bulletin – brochure – PCX web site
- Survey clients/partners/stakeholders about ongoing and potential activities and needs for our services – develop mailing list
- Identify meetings, conferences to attend – host annual workshop/seminar
- Representation at Planning CoP conference

US Army Corps of Engineers ®

Communications Strategy (cont.)

- **Capture institutional knowledge – Lessons Learned**
  - **Facilitate shared knowledge and experience** among District-level planners, via PCX web site and/or Groove workspace:
    - Discussion board
    - Wiki knowledge base
    - Indexed archive of results of ITR/EPR actions
  - **Maintain and publicize libraries/databases** of mission-related information: pertinent Corps guidance; available training; ongoing/prospective studies (water supply, water reallocation, watershed management); Corps reports; Corps projects with water management/reallocation elements
  - **Share items of interest** via PCX newsletter/bulletin

US Army Corps of Engineers ®

FY 2005 Accomplishments

- **Filled critical PCX staff vacancy** (Technical Director)
- **Established initial PCX web site**, linked from HQ's Planners Resource Web home page
- **Revised PCX PgMP and brochure**
- **Participated in national PCX conferences and telecons**
- **Established PCX coordination** with national Planning CoP, Economics and Plan Formulation sub-CoPs

US Army Corps of Engineers ®

Top three challenges to PCX

Limited funds and resources — not only for PCX operations, but for Corps water supply and reallocation analyses:

- Typically, **low level of effort** for District studies
- Watershed-oriented, collaborative approach can require **complex and costly systems analyses**
- **Very broad team-building and partnering requirements:** beyond the Planning and Engineering CoPs into Operations and Regulatory CoPs; other Federal agencies; state, regional, and local resource and utilities agencies; sponsors and interest groups

PCX has limited visibility, both nationally and in the Districts — WS business line is relatively small (<1% of Corps' civil works budget) and geographically concentrated (most projects are in SWD); GI planning element of the business line is smaller still

Timely review and approval of reports

Questions ? Comments